CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-30

NPDES NO. CA0110248

WASTE DISCHARGE REQUIREMENTS FOR:

U.S. NAVY
PUBLIC WORKS CENTER - SAN FRANCISCO BAY
(FORMERLY HAMILTON AIR FORCE BASE)
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. The U.S. Navy, Public Works Center - San Francisco Bay (hereinafter discharger), by application dated March 9, 1978, has applied for waste discharge requirements and a permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger presently discharges wastes from the Public Works Center - San Francisco Bay into San Pablo Bay, a water of the United States, at a point 2.7 miles south of the mouth of Novato Creek, latitude 122°29'00", longitude 38°03'15".

3. The report of waste discharge describes the existing discharge as follows:

   Average Flow: 0.2 million gallons per day (mgd)
   Design Flow: 0.5 million gallons per day (mgd)

4. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for San Pablo Bay.

5. The beneficial uses of San Pablo Bay are:

   a. Navigation
   b. Water Contact Recreation
   c. Non-Contact Water Recreation
   d. Commercial and Sport Fishing
   e. Wildlife Habitat
   f. Preservation of Habitat for Rare and Endangered Species
   g. Marine Habitat
   h. Fish Migration
   i. Fish Spawning
   j. Shellfish Harvesting

6. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) prohibits the discharge of wastewater to waters where 10:1 initial dilution is not provided.

7. The Basin Plan also prohibits the discharge of wastewater which has particular characteristics of concern to beneficial uses into any non-tidal water or dead-end slough or similar confined water areas.

8. At the present time, the discharge is from a 12-inch outfall which discharges to the tidal mud flats of San Pablo Bay, approximately 200 feet bayward from the levee separating the facility from the Bay. At low tides the effluent flows up to a thousand feet across exposed mud flats before entering Bay waters. The discharge has eroded a channel through the mud flats and is not achieving an initial 10:1 dilution.

9. The Regional Board has previously determined that the area around the Novato outfall is one where poor flushing characteristics exist (i.e., the relatively long residence time of the waste in the receiving waters near the outfall is such that a confined water body prevails at certain times of the year). The same characteristics pervail at the existing outfall for the Public Works Center - San Francisco Bay, and therefore the existing discharge is to a confined water body.

10. The discharger is participating in the Marin-Sonoma Subregional Study to develop a wastewater management project and achieve compliance with the effluent and receiving water limitations and prohibitions in the Basin Plan. Finalization of the Environmental Impact Report and Environmental Impact Statement (EIR/EIS) is anticipated in early 1979.

11. The apparent best alternative in the Wastewater Management Plan proposes termination of the existing discharge. The existing treatment facilities would be abandoned, with the raw wastes being pumped to and treated at Novato Sanitary District's Ignacio treatment plant. From there the treated effluent would be discharged, through the existing Novato outfall into San Pablo Bay.

12. As this project is an NPDES permit, this Board, pursuant to Water Code Section 13389, is not required to comply with the provisions of Chapter 3 of Division 13 of the Public Resources Code (California Environmental Quality Act).

13. On May 28, 1969, the Board adopted Resolution No. 69-24 prescribing requirements for waste discharged from Hamilton Air Force Base to San Pablo Bay. On February 10, 1975 the Environmental Protection Agency issued an NPDES permit for the discharge but that permit expired September 30, 1978.

14. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The discharge of wastewater at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited (receiving water to wastewater flow).

2. The discharge of wastewater which has characteristics of concern to beneficial uses into any dead-end slough or similar confined water areas or their immediate tributaries is prohibited.

3. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the plant or from the collection system.

4. The average dry weather flow shall not exceed 0.5 mgd. Average shall be determined over three consecutive months each year.

B. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

| | Constituents | Units | 30-Day Average | 7-Day Average | Daily Maximum | Instantaneous Maximum |
|---|---|---|---|---|---|---|
| a. | BOD | mg/l | 30 | 45 | 60 | - |
| | | lbs/day | 438 | - | 876 | - |
| | | kg/day | 200 | - | 400 | - |
| b. | Suspended Solids | mg/l | 30 | 45 | 60 | - |
| | | lbs/day | 438 | - | 876 | - |
| | | kg/day | 200 | - | 400 | - |
| c. | Oil & Grease | mg/l | 10 | - | 20 | - |
| | | lbs/day | 147 | - | 147 | - |
| | | kg/day | 67 | - | 67 | - |
| d. | Chlorine Residual | mg/l | - | - | - | 0.0 |
| e. | Settleable Matter | ml/l/hr | 0.1 | - | - | 0.2 |

2. The arithmetic mean of the biochemical oxygen demand (5 day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

3. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

4. The waste as discharged shall meet the following limits of quality:

   The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 milliliters when verified by a repeat sample taken within 48 hours.

5. In any representative set of samples the waste as discharged shall meet the following limit of quality:

   The survival of an acceptable test organism in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

6. Representative samples of effluent shall not exceed the following limits more than the percentage of time indicated:(1)

| Constituent | Unit of Measurement | 50% of time | | 10% of time | |
|---|---|---|---|---|---|
| Arsenic | mg/l (kg/day) | 0.01 | (0.019) | 0.02 | (0.038) |
| Cadmium | mg/l (kg/day) | 0.02 | (0.038) | 0.03 | (0.057) |
| Total Chromium | mg/l (kg/day) | 0.005 | (0.009) | 0.01 | (0.019) |
| Copper | mg/l (kg/day) | 0.2 | (0.38) | 0.3 | (0.57) |
| Lead | mg/l (kg/day) | 0.1 | (0.19) | 0.2 | (0.38) |
| Mercury | mg/l (kg/day) | 0.001 | (0.0019) | 0.002 | (0.0038) |
| Nickel | mg/l (kg/day) | 0.1 | (0.19) | 0.2 | (0.38) |
| Silver | mg/l (kg/day) | 0.02 | (0.038) | 0.04 | (0.076) |
| Zinc | mg/l (kg/day) | 0.3 | (0.57) | 0.5 | (0.95) |
| Cyanide | mg/l (kg/day) | 0.1 | (0.19) | 0.2 | (0.38) |
| Phenolic Compounds | mg/l (kg/day) | 0.5 | (0.95) | 1.0 | (1.89) |
| Total Identifiable Chlorinated Hydrocarbons(2) | mg/l (kg/day) | 0.002 | (0.0038) | 0.004 | (0.0076) |

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

| | | |
|---|---|---|
| a. | Dissolved oxygen | 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen. |
| b. | Dissolved sulfide | 0.1 mg/l maximum. |
| c. | pH | Variation from natural ambient pH by more than 0.2 pH units. |
| d. | Un-ionized Ammonia as N | 0.025 mg/l annual median<br>0.4 mg/l maximum |
| e. | Nutrients | 50 µg/l chlorophyll, maximum. When background levels exceed this requirement, then this discharge shall not add further nutrients. |

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Resolution No. 69-24, adopted by the Board on May 28, 1969. Resolution No. 69-24 is hereby rescinded.

2. The discharger shall comply with all prohibitions, effluent and receiving water limitations, and provisions of this order immediately.

3. If the discharger elects to comply with the specifications of this Order listed in provisions D.2 by construction of separate treatment plant improvements rather than by participation in the subregional treatment and disposal program, this Board will consider adoption of more stringent requirements, and/or prohibitions to protect shellfish beds for the harvesting of shellfish for human consumption.

4. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program as directed by the Executive Officer.

5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements, and Definitions" dated April 1977.

6. This Order expires November 1, 1983. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 30 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 20, 1979.

FRED H. DIERKER
Executive Officer

Attachment:
"Standard Provisions, Reporting Requirements and Definitions"

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

U. S. Navy

Public Works Center - S.F. (Formerly Hamilton AFB

Marin County

NPDES NO. CA 0110248

ORDER NO. 79-30

CONSISTS OF

PART A

AND

PART B

U. S. NAVY
PUBLIC WORKS CENTER
SAN FRANCISCO, MARIN COUNTY

PART B

I. DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

A. INFLUENT AND INTAKE

| Station | Description |
|---|---|
| A-1 | At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment. |

B. EFFLUENT

| Station | Description |
|---|---|
| E-1 | At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-1-D.) |
| E-1-D | At any point in the disinfection facilities for Waste E-1, at which point adequate contact with the disinfectant is assured. |

II. SCHEDULE OF SAMPLING, ANALYSIS AND REPORTING

The schedule of sampling and analysis shall be that given as Table I. Written reports shall be filed quarterly by the fifteenth of the following month.

III. NON-APPLICABLE SECTIONS OF PART A

Does not include the following paragraphs of Part A:

C.3., C.4., C.5.a., C.5.c., C.5.d., C.5.e., D.3., D.4.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-30.

2. Has been agreed to by the discharger in letter dated November 30, 1978.

3. Is effective on the date shown below.

4. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Effective Date_____

# TABLE I

## SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

| Sampling Station | A-1 | E-1 or E-1-D | | |
|---|---|---|---|---|
| *TYPE OF SAMPLE* | C-24 | G | C-24 | Cont |
| Flow Rate (mgd) | | | | D |
| BOD, 5-day, 20° C, or COD (mg/l & kg/day) | W | | W | |
| Chlorine Residual & Dosage (mg/l & kg/day) | | 2H | 1/ | |
| Settleable Matter (ml/1-hr. & cu. ft./day) | | 5/W | | |
| Total Suspended Matter (mg/l & kg/day) | W | | W | |
| Oil & Grease (mg/l & kg/day) | | | M | |
| Coliform (Total) (MPN/100 ml) per req't | | 3/ W | | |
| Fish Toxicity, 96-hr. $TL_{50}$ % Survival in undiluted waste | | | M | |
| Ammonia Nitrogen (mg/l & kg/day) | | | Q | |
| Nitrate Nitrogen (mg/l & kg/day) | | | Q | |
| Nitrite Nitrogen (mg/l & kg/day) | | | Q | |
| Total Organic Nitrogen (mg/l & kg/day) | | | Q | |
| Total Phosphate (mg/l & kg/day) | | | Q | |
| Turbidity (Jackson Turbidity Units) | | | | |
| pH (units) | | 3/W | | |
| Dissolved Oxygen (mg/l and % Saturation) | | 3/W | | |
| Temperature (°C) | | 3/W | | |
| Apparent Color (color units) | | | | |
| Secchi Disc (inches) | | | | |
| Sulfides (if DO ≤ 5.0 mg/l) Total & Dissolved (mg/l) | | | | |
| Arsenic (mg/l & kg/day) | | | Y | |
| Cadmium (mg/l & kg/day) | | | Y | |
| Chromium, Total (mg/l & kg/day) | | | Y | |
| Copper (mg/l & kg/day) | | | Y | |
| Cyanide (mg/l & kg/day) | | | Y | |
| Silver (mg/l & kg/day | | | Y | |
| Lead (mg/l & kg/day) | | | Y | |

## TABLE I (continued)
## SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

| Sampling Station | A-1 | E-1 or E-1-D | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *TYPE OF SAMPLE* | C-24 | G | C-24 | Cont | | | | | | | | | |
| Mercury (mg/l & kg/day) | | | Y | | | | | | | | | | |
| Nickel (mg/l & kg/day) | | | Y | | | | | | | | | | |
| Zinc (mg/l & kg/day) | | | Y | | | | | | | | | | |
| PHENOLIC COMPOUNDS (mg/l & kg/day) | | | Y | | | | | | | | | | |
| All Applicable Standard Observations | | | | | | | | | | | | | |
| Bottom Sediment Analyses and Observations | | | | | | | | | | | | | |
| Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day) | | | Y | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
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### LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

FOOTNOTE: 1/During hours when plant is manned. Include $SO_2$ dosage rate.